CLAIMS 1-38 - LI

Claims 1-10, 12-21 and 23-38 stand rejected under 35 USC §102(e) as being anticipated by Li et al., U.S. Patent No. 6,345,279 (hereinafter "*Li*"). Applicant respectfully submits that such claims are patentable over *Li*.

Claim 1 of the present application, as amended, reads:

> In a client computer system, a method of operation comprising:
> determining operating characteristic value(s), by the client system, for at least one operating characteristic of the client computer system;
> adaptively requesting, by the client system, streaming of **model data comprising geometry data** from a remote content providing server, based at least in part on the determined operating characteristic value(s) of the at least one operating characteristic of the client computer system.

Thus, as amended, claim 1 is clearly directed towards the adaptive requesting of **model data comprising geometric data** from a remote server, where the adaptive requesting of the **model data comprising geometric data** is performed by the client.

As those skilled in the art would readily, based on the plain meaning of the term, **model data** of different fidelity comprises **geometric data** of different fidelity. For example, a modeled sphere of higher fidelity would comprise more points and vectors to enable a smoother rendering of the modeled sphere, whereas a modeled sphere of a lower fidelity would comprises less points and vectors, resulting in a more crude rendering of the modeled sphere.

In contrast, *Li* discloses a system where a content adaptation process can modify a multi-media document W having a number of content items, based on the features of a client, as specified by the client profile. Each content item may be transcoded into an

infopyramid comprising video, image, text, and audio data of different modality and fidelity. See Figures 1 and 2, and their corresponding descriptions in column 4, lines 4-20 and 50-67.

As those skilled in the art would readily appreciate,

(a) video data of different fidelity comprises pictures of pixel data encoded/compressed at different fidelity levels, i.e. the pictures of pixel data having been reduced first by various compression processes such as predictions from prior frames, and then by coding processes, such as variable length encoding;

(b) image data of different fidelity comprises bit maps of different resolutions;

(c) textual data of different fidelity comprises character and symbol data with different font size attributes; and

(d) audio data of different fidelity comprises sound data rendered in one or more channels, i.e. mono, stereo, surround and so forth.

Accordingly, *Li* did not teach or suggest adaptation of model data comprising geometric data.

Therefore claim 1 is patentable over *Li*.

Claims 2-10 and 35-36 depend from claim 1. Thus for at least the reasons discussed above with respect to claim 1, claims 2-10 are allowable over *Li*.

Claims 12, 23, 26 and 29 contain substantially the same limitations discussed above with respect to claim 1. Resultantly, Applicant respectfully submits that for at least the reasons discussed above with respect to claim 1, claims 12, 23, 26 and 29 are also allowable over *Li*.

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Claims 13-21, 24-25, 27-28, 30-34 and 37-38 depend from claims 9, 14, 18 and

21. Thus, for at least the reasons discussed above with respect to claims 12, 23, 26

and 29, Applicant respectfully submits that claims 13-21, 24-25, 27-28, 30-34 and 37-38

are not anticipated by *Li*.

CLAIMS 8-9, 19-20, 32-33- LI

Claim 8 stand rejected under 35 USC §102(e) as being anticipated *Li*. As stated

above, claim8 is not anticipated by *Li*. However, for the additional reasons discussed

below, Applicant respectfully submits that such claims are patentable over *Li*.

Claim 8, dependant from claim 6, reads:

> 6. The method of claim 1, wherein the method further
> comprises monitoring at least one performance indicator
> for the client computer system.

> 8. The method of claim 6, wherein said adaptively
> requesting of streaming of model data comprises
> switching to requesting the remote content providing
> server for higher precision versions of the model data,
> responsive to indicator value(s) of the monitored at least
> one performance indicator.

Thus, in the present claim, the adaptively requesting of streaming of model data

is responsive to performance indicator value(s) for the client computer system. In

contrast, the data used in *Li* to indicate the type of document to render on the client

device is profile data. Profile data lists the capabilities and resource of the device

(column 6, lines 3-4). In *Li,* static indicators of the client device are used to determine

the document type to render on the client device. Thus, in *Li*, the adaptively requesting

cannot be said to be responsive to indicator values of the monitored at least one

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performance indicator. Resultantly, for at least the reasons discussed above, Applicant respectfully submits that claim 8 is not anticipated by *Li*.

Claims 9, 19, 20, 32 and 33 contain substantially the same limitations discussed above with respect to claim 8. Resultantly, Applicant respectfully submits that for at least the reasons discussed above with respect to claim 8, claims 9, 19, 20, 32 and 33 are also allowable over *Li*.

REJECTIONS UNDER 35 U.S.C. 103

Claims 11 and 22 where rejected under 35 U.S.C. 103(a) as being unpatentable over *Li*. Claims 11 and 22 depend from claims 1 and 12 respectively. Applicant respectfully submits that claims 11 and 22 are not obvious over *Li*.

As previously discussed, claims 1 and 12 are not anticipated by *Li*. Specifically, *Li* does not teach adaptive requesting by the client of the streaming of model data from a remote server. The Examiner has taken Official Notice that the concepts and advantages of dropping audio data frames that arrive too late with respect to its sequence is old and well known in the data communications art. Assuming, arguendo, that dropping audio data frames that arrive too late with respect to its sequence is old and well known in the data communications art, *Li* does not teach adaptive requesting by the client of the streaming of model data comprising geometry data from a remote server. Applicant respectfully submits that, since the reference for the obviousness rejection does not anticipate the independent claims upon which claims 11 and 22 are based, claims 11 and 22 cannot be obvious over *Li*.

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Conclusion and Epilogue

In view of the foregoing, Applicant respectfully submits that claims 1-38 are in condition for allowance and early issuance of Notice of Allowance is respectfully requested.

If any additional fee is required, please charge Deposit Account No. 500393.

Respectfully submitted,

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Dated: 3 March , 2003   By: _____

Robert Watt
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Marked Up Version of Amended Claims

1. (Once Amended) In a client computer system, a method of operation comprising:

determining operating characteristic value(s) for at least one operating characteristic of the client computer system;

adaptively requesting streaming of model data from a remote content providing server, based at least in part on the determined operating characteristic value(s) of the at least one operating characteristic of the client computer system, said model data comprising geometry data.

4. (Once Amended) The method of claim 1, wherein said model data further comprises of data selected from a group consisting of lighting data, coloring data, texturing data, and animation data.

11. (Once Amended) The method of claim 10, wherein said automatic synchronization of rendering of the received model data comprises audio data in proportion to the amount of the time the audio data arrived late.

12. (Once Amended) A client computer system comprising:

a processor to execute programming instructions; and

a storage medium, coupled to the processor, having stored therein a first and a second plurality of programming instructions to be executed by the processor, the first plurality of programming instructions, when executed, determine operating characteristic value(s) for at least one operating characteristic of the client computer system, and the second plurality of programming instructions, when executed, adaptively request streaming of model data from a remote content providing server, based at least in part on the determined operating characteristic value(s) of the at least

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one operating characteristic of the client computer system, said model data comprising geometric data.

15. (Once Amended) The client computer system of claim 12, wherein said model data further comprises of data selected from a group consisting of lighting data, coloring data, texturing data, and animation data.

22. (Once Amended) The method of claim 10, wherein said automatic synchronization of rendering of the received model data comprises audio data in proportion to the amount of the time the audio data arrived late.

23. (Once Amended) In a computer server, a method of operation comprising:

storing multiple versions of model data that includes geometry data, tailored for different operating environments differentiated in accordance with value(s) of at least one operating characteristic of a remote requesting client computer system;

accepting requests for said model data that includes version selection designation from the remote requesting client computer system; and

streaming the requested versions of the model data to the remote requesting client computer system, responsive to the accepted requests.

25. (Once Amended) The method of claim 23, wherein said model data further comprises of data selected from a group consisting of lighting data, coloring data, texturing data, and animation data.

26. (Once Amended) A computer server comprising:

a processor to execute programming instructions; and

a storage medium, coupled to the processor, having stored therein multiple versions of model data that includes geometry data, tailored for different operating environments differentiated in accordance with value(s) of at least one operating characteristic of a remote requesting client computer system, and a plurality of programming instructions, when executed, accept requests for said model data that includes version selection designation from the remote requesting client computer system, and stream the requested versions of the model data to the remote requesting client computer system, responsive to the accepted requests.

27. (Once Amended) The computer server of claim 26, wherein said model data comprises of data selected from a group consisting of lighting data, coloring data, texturing data, and animation data.

28. (Once Amended) A method for streaming multi-media content comprising:

storing by a multi-media content providing server, multiple versions of model data that includes geometry data, tailored for different operating environments differentiated in accordance with value(s) of at least one operating characteristic of a remote requesting client computer system;

determining by a multi-media content player of the remote requesting client computer system, operating characteristic value(s) for at least one operating characteristic of the remote requesting client computer system;

adaptively requesting by the multi-media content player, different versions of model data from the multi-media content providing server, based at least in part on the determined operating characteristic value(s) of the at least one operating characteristic of the remote requesting client computer system; and

streaming by the multi-media content providing server, the requested versions of the model data, responsive to the requests of the multi-media content player.